

REMARKS

Initially, Applicants would like to thank Examiner Brutus for granting an interview and for his time spent during the interview. Applicants would also like to thank Supervisory Examiner Le for attending the interview and for his input during the interview.

The application has been amended consistent with the discussion during the interview in a manner that is believed to place it in condition for allowance at the time of the next Official Action.

Claims status

Claims 1, 4-16 and 31-35 were previously pending in the application. New claims 36-39 are added. Therefore, claims 1, 4-16 and 31-39 are presented for consideration.

35 USC 112, second paragraph rejection

Claim 1 is amended to provide antecedent basis for "cartilage". Claim 1 is also amended to recite "components of the tissue" and to clarify the operation of the fiber bundle.

As discussed during the interview, amending claim 1 as above is believed to address the 35 U.S.C. § 112, second paragraph rejection as to claims 1, 13-16 and 32-35 and withdrawal of the same is respectfully requested.

35 USC 103 rejection

Claims 1, 4-6, 8-11, 13-16 and 31-35 were rejected under 35 U.S.C. § 102(b) as anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over CANE et al. (US Publication 2001/0056237 A1). That rejection is respectfully traversed.

Claim 1 is amended to clarify how cartilage thickness is determined using the device of claim 1 and recites in part that a signal processor is arranged to determine the cartilage thickness based on optical properties of cartilage and underlying bone at a plurality of wavelengths (see paragraph [0027] as well as Table 1 of the published application (2007/0179381)).

Claim 31 is amended along the same lines and recites deriving cartilage thickness based on optical properties of cartilage and underlying bone.

As discussed during the interview, CANE discloses a device for monitoring a presence of one or more chromophores in tissue, especially epithelial tissue. Such device is used to measure tissue color. CANE does not determine thickness of a cartilage layer covering bone.

Rather, as set forth above, CANE is directed to skin color measurement and indeed, any mention of thickness in CANE is with respect to thickness of skin layers.

CANE does not relate to utilization of optical properties for a first layer of one type (cartilage) and the

optical properties of an underlying layer of another type (bone) for thickness determination of the first layer.

Paragraph [0010] of CANE, offered in the Official Action, merely suggests that the skin is thicker in certain parts of the body. It appears that the Official Action is taking the disclosure of CANE out of context with respect to the thickness at the joint. This thickness is compared to the thickness at the lower back, which also includes bone. Since there is bone in both instances, it is apparent that CANE does not use bone as part of his analysis.

Thus, as pointed out at the interview there is no logical connection between the color determination of CANE based on collagen and the thickness determination of the present invention based on cartilage and bone that would lead one of ordinary skill in the art to the presently recited invention.

The dependent claims are believed to be patentable at least for depending from allowable independent claim.

Claims 7 and 12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over CANE et al. in view of KANEKO et al. (US Patent 5,305,759). The rejection is respectfully traversed.

KANEKO is only cited with respect to the features of claims 7 and 12. KANEKO does not overcome the shortcomings of CANE as set forth above with respect to claim 1. Since claims 7 and 12 depend from claims 1, these claims are believed to be

patentable at least for depending from allowable independent claim.

New claims 36-39 correspond to previous claims 14 and 16 but dependent from claims 32-35.

In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future submissions, to charge any deficiency or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON

/Liam McDowell/  
\_\_\_\_\_  
Liam McDowell, Reg. No. 44,231  
Customer No. 00466  
209 Madison Street, Suite 500  
Alexandria, VA 22314  
Telephone (703) 521-2297  
Telefax (703) 685-0573  
(703) 979-4709

LM/fb